BIBLIOGRAPHY OF PUBLICATIONS OF ^{137}CESIUM STUDIES RELATED TO EROSION AND SEDIMENT DEPOSITION

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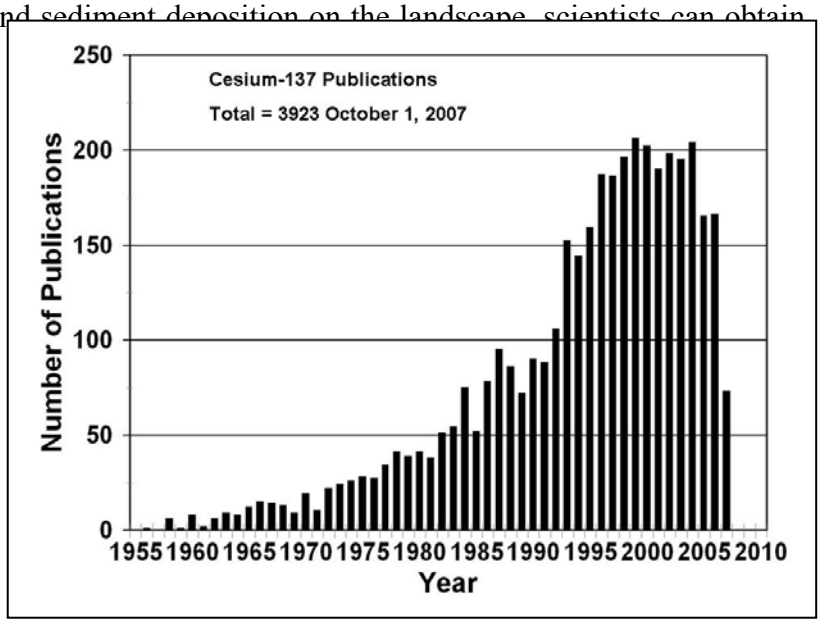
1. INTRODUCTION

Soil erosion and its subsequent redeposition across the landscape is a major concern around the world. A quarter century of research has shown that measurements of the spatial patterns of radioactive fallout ^{137}Cesium can be used to measure soil erosion and sediment deposition on the landscape. The ^{137}Cs technique is the only technique that can be used to make actual measurements of soil loss and redeposition quickly and efficiently. By understanding the background for using the ^{137}Cs technique to study erosion and sediment deposition on the landscape, scientists can obtain unique information about the landscape that can help them plan techniques to conserve the quality of the landscape. Research should continue on the development of the technique so that it can be used more extensively to understand the changing landscape.



On 16 July 1945 at 1230 Greenwich Civil Time, nuclear weapon tests were begun that have released ^{137}Cs and other radioactive nuclides into the environment. Over the 60+ years since this first test, much research

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has been done to understand the movement and fate of ^{137}Cs in the environment. Many of these studies are critical for understanding the application of ^{137}Cs to the study of soil erosion and the subsequent redeposition of the eroded particles on the landscape. This bibliography presents significant background publications that are useful to studies of erosion and sediment deposition using ^{137}Cs. The bibliography also includes citations of reported studies of the use of ^{137}Cs to measure either erosion or sediment deposition. While the bibliography is extensive, there are certainly publications that we have missed. There has been a rapid increase in publication related to the use of ^{137}Cs related to the erosion and sedimentation (Fig. 1). However, we feel that this bibliography does demonstrate the widespread use and acceptance of ^{137}Cs for measuring erosion and sediment deposition. We hope it will also be useful to those using or preparing to use ^{137}Cs and will help promote the use of ^{137}Cs in erosion and sediment deposition research and measurements.

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